

LXXV.—Six new Fruit-bats of the Genera *Macroglossus* and *Syconycteris*. By KNUD ANDERSEN.

I. *The Species and Subspecies of Macroglossus.*

All known forms of *Macroglossus* are referable to two species, *M. minimus* and *M. lagochilus*. In the former the nares are directed more outward than forward, and the median vertical groove on the upper lip (the continuation of the internarial groove) is obsolescent or absent; in the latter the nares are directed half outward, half forward, and the median vertical groove on the upper lip is sharply defined. *M. minimus* ranges from Java eastward to Timor, west and north-westward to Sumatra, the Malay Peninsula, Siam, Burma, and Darjeeling. *M. lagochilus* covers the whole of Austro-Malaya (thus far no record from the Gilolo group) and extends west to the Philippines and Borneo. The two species appear nowhere to occur together.

The name *M. minimus*, as hitherto understood, covers two distinct forms. In the one (*M. m. minimus*) the rostrum is, both absolutely and relatively, shorter, being slightly less than one-third of the total length of the skull, and all measurements (skull, tooth-rows, external dimensions) average conspicuously smaller; in the other (*M. m. sobrinus*, subsp. n.) the rostrum is longer, slightly more than one-third of the skull, and all measurements average larger. The former (*minimus*) is, so far, known with certainty only from Java (including Madura) and Kangean Islands, and is probably the truly indigenous Javan race of the species, whereas the latter (*sobrinus*) may be presumed originally to have been confined to S.E. Asia, whence (as soon as altered physical conditions favoured an extension of its area south-eastward) it has spread to Sumatra and Java; even now the predominant form in Java seems to be *minimus*. Since *sobrinus* (if this hypothesis is correct) has spread south-eastward to Java, it is by no means unlikely that *minimus* has extended its range westward to Sumatra and, perhaps, to the Malay Peninsula, but as yet there is no conclusive evidence that such is the case.

A line drawn north-south between the Moluccas and New Guinea divides the area inhabited by *M. lagochilus* into a western and eastern half. The islands of the western half—viz., Borneo, the Philippines, Sanghir Islands, Celebes, and the Amböina group—are occupied by one race (*M. l. lagochilus*) in which the premolars and molars are not more reduced in breadth than in *M. minimus*; those of the eastern

half—viz., Mysol, New Guinea, the Bismarck Archipelago, Key, Aru, Torres Straits, and Solomon Islands—by three races (*M. l. nanus*, *pygmæus*, and *microtus*; the two latter new), which, all taken together, are characterized, as against *M. l. lagochilus*, by still narrower cheek-teeth, and distinguishable from each other by average differences in the length of the rostrum or size of the ears.

The new forms may be briefly diagnosed as follows :—

*Macroglossus minimus sobrinus*, subsp. n.

Averaging conspicuously larger than *M. m. minimus*, and with relatively longer rostrum. Skull, lambda to gnathion 28·5–29·5 mm. (in *M. m. minimus* 24·8–27·5), rostrum, orbit to nares 9·5–10·5 (7·8–8·8), forearm 42–48·5 (40–44·5).

*Type.* ♀ ad. skin with skull, Gunong Igari, Perak; March, 1898; presented by A. L. Butler, Esq., B.M. 98. 11. 29. 1.

Total number of specimens examined, twenty-six (compared with forty of *M. m. minimus*).

*Macroglossus lagochilus pygmæus*, subsp. n.

As *M. l. nanus*, but rostrum relatively a little shorter, from orbit to nares 6·8 mm. (against 7·5–8·5 in *nanus*).

*Type.* ♂ ad. al. with skull, Mer, Murray Is., Torres Straits, presented by Professor A. C. Haddon, B.M. 99. 9. 10. 1.

Two specimens examined, both from Murray Is.

*Macroglossus lagochilus microtus*, subsp. n.

Similar to *M. l. pygmæus*, but ears relatively smaller; length from orifice 11–12·5 mm. (in *nanus* and *pygmæus* 12·5–13·5), breadth of flattened ear 8–8·5 (9–9·5).

*Type.* ♀ ad. al. with skull, Aola, Guadalcanar, Solomon Is., collected by C. M. Woodford, Esq., B.M. 88. 1. 5. 14.

Three specimens examined, from the islands of Florida and Guadalcanar.

## II. *The Species and Subspecies of Syconycteris.*

Seven recognizable forms, referable to three closely related species, are now known, viz., *S. crassa* (with five local races), *australis*, and *naias* (sp. n.). In *S. crassa* the cheek-teeth are elongate in transverse section ( $p^4$ ,  $m^1$ ,  $p_4$ , and  $m_1$  more than half as broad as long), and  $m^2$  and  $m_3$  are always present (cheek-teeth  $\frac{5}{6}$ ); the species ranges over the whole of the

Amboina and New Guinea groups of islands, except Woodlark Is. In *S. australis* (Queensland) and *S. naias* (Woodlark Is.) the cheek-teeth are linear (as in *Macroglossus*;  $p^4$ ,  $m^1$ ,  $p_4$ , and  $m_1$  only half as broad as long). The former is in every other respect similar to the New Guinea race (*papuana*) of *S. crassa*, whereas *S. naias* differs by having lost the small posterior molar above and below (cheek-teeth  $\frac{4}{5}$ ).

The five subspecies of *S. crassa* differ from each other only in general size or in the length of the tooth-rows. Specimens from New Guinea and the Aru Islands (*S. c. papuana*) are of medium size; those from the Key Islands (*S. c. keyensis*, subsp. n.) have somewhat shorter tooth-rows, those from the Bismarck Archipelago (*S. c. finschi*) average a little smaller; finally, east (Trobriand and D'Entrecasteaux Islands: *S. c. crassa*) and even more so west (Amboina group: *S. c. major*, subsp. n.) of New Guinea the size of the animals is noticeably increased, though not more so but that there is still no absolutely hard-and-fast line between *papuana* and *crassa*, nor between *crassa* and *major*.

Subjoined brief preliminary diagnoses of the new forms:—

*Syconycteris crassa keyensis*, subsp. n.

Similar in every respect to *S. c. papuana*, except for the slightly shorter tooth-rows:  $c-m^2$  (crowns) about 7 mm. as against 7·6–8·8 in *papuana*.

*Type.* ♂ ad. al. with skull, Key Is. (purchased), B.M. 99. 12. 4. 2.

Two specimens examined, both from Key Is.

*Syconycteris crassa major*, subsp. n.

As *S. c. crassa*, but averaging conspicuously larger. Skull, total length 28·8–29·8 mm. (25–28·8 in all other forms of the species taken together),  $c-m^2$  (crowns) 8·8–9·7 (7–8·8), forearm 46–49 (39–47).

*Type.* ♂ ad. al. with skull, Amboina, presented by F. Muir, Esq., B.M. 10. 7. 25. 1.

Five examples examined, from Amboina and Ceram.

*Syconycteris naias*, sp. n.

As *S. australis*, with the cheek-teeth as narrow (linear) as in that species, but  $m^2$  and  $m_3$  absent.

*Type.* ♀ ad. al. with skull, Woodlark Is., collected by A. S. Meek, B.M. 96. 11. 5. 29.